



Indiana Crop & Weather Report

INDIANA AGRICULTURAL STATISTICS
 U.S. DEPARTMENT OF AGRICULTURE
 PURDUE UNIVERSITY
 1148 AGAD BLDG, ROOM 223
 WEST LAFAYETTE IN 47907-1148
 Phone (765)494-8371
 Phone (800)363-0469
 FAX (765)494-4315
 FAX (800)363-0475

Released: Monday, 3PM

April 23, 2001

Vol. 51, #16

West Lafayette, IN 47907

CROP REPORT FOR WEEK ENDING APRIL 22

AGRICULTURAL SUMMARY

Cold temperatures, rain and snow early in the week slowed field activities in most central and northern regions of the state, according to the Indiana Agricultural Statistics Service. Frost occurred in most areas of the state. Field activities and planting of corn gained momentum late in the week as soils became progressively drier. Spring growth of pastures and forage crops continues to improve.

FIELD CROPS REPORT

Fieldwork continued to make good progress in the southern regions of the state last week. Many farmers began planting corn as conditions permitted. There were 3.4 **days** suitable for fieldwork. Eleven percent of the **corn** acreage is planted compared with 10 percent last year and 7 percent for the 5-year average. By area, 3 percent of the corn is planted in the north, 8 percent in the central regions and 33 percent in the south. Some early planted corn fields have emerged, mostly in the southwest. A few scattered fields of **soybeans** have been planted. Other activities during the week included hauling grain to market, applying anhydrous ammonia, preparing equipment, spraying, planting mint roots, purchasing supplies, cleaning fence rows, ditching, and hauling manure.

Fifty-six percent of the winter wheat acreage is **jointed**, behind the 78 for the previous year, but ahead of the 53 percent for the 5-year average. Wheat condition declined from a week earlier. Winter wheat **condition** is rated 75 percent good to excellent compared with 75 percent a year ago at this time.

LIVESTOCK, PASTURE AND RANGE REPORT

Pasture condition is rated 8 percent excellent, 53 percent good, 32 percent fair, 6 percent poor and 1 percent very poor. **Hay** supplies are rated 1 percent very short, 3 percent short, 83 percent adequate and 13 percent surplus. Livestock remain in mostly good condition. Calving is very active. Spring lambing is winding down.

CROP PROGRESS TABLE

Crop	This Week	Last Week	Last Year	5-Year Avg
Percent				
Corn Planted	11	3	10	7
Winter Wheat Jointed	56	35	78	53

CROP CONDITION TABLE

Crop	Very Poor	Poor	Fair	Good	Excellent
Percent					
Pasture	1	6	32	53	8
Winter Wheat 2001	0	3	22	60	15
Winter Wheat 2000	1	4	20	54	21

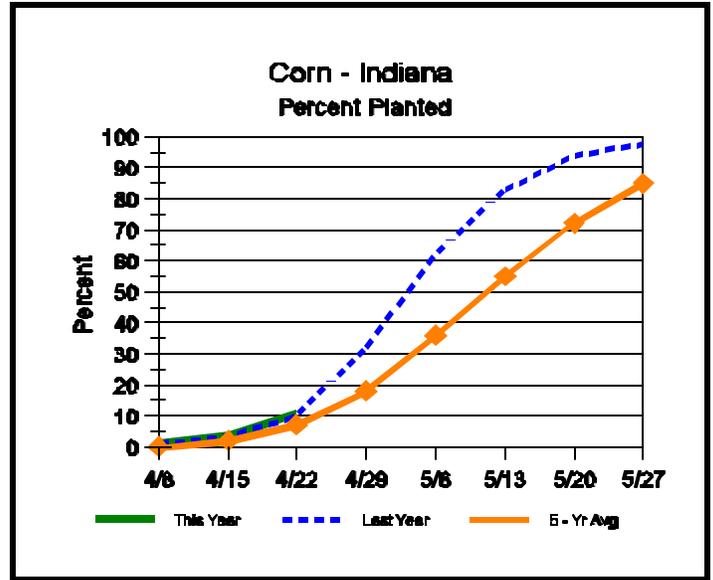
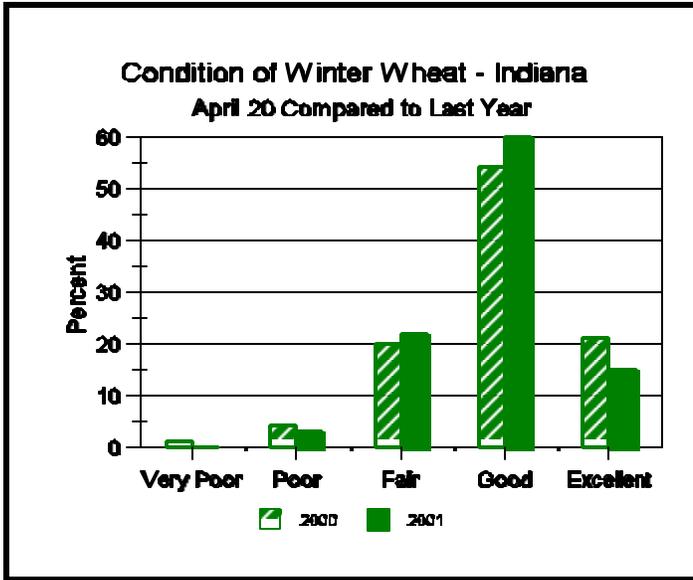
SOIL MOISTURE & DAYS SUITABLE FOR FIELDWORK TABLE

	This Week	Last Week	Last Year
Percent			
Topsoil			
Very Short	3	2	3
Short	12	8	13
Adequate	67	72	66
Surplus	18	18	18
Subsoil			
Very Short	4	4	15
Short	18	19	39
Adequate	69	71	43
Surplus	9	6	3
Days Suitable	3.4	3.7	2.7

CONTACT INFORMATION

--Ralph W. Gann, State Statistician
 --Bud Bever, Agricultural Statistician
 E-Mail Address: nass-in@nass.usda.gov
<http://www.nass.usda.gov/in/index.htm>

Crop Progress



Other Agricultural Comments And News

Frost & Low Temperature Injury to Corn and Soybean

Potentially lethal low temperatures (relative to corn and soybean) occurred in locations throughout Indiana during the past several nights. Low temperatures during the morning hours of April 17 were 26°F near Wanatah, 25°F near Columbia City, 26°F near Farmland, 26°F near Terre Haute, 28°F near West Lafayette, 29°F near Butlerville and 31°F near Oolitic. The Wednesday morning low temperatures were a little higher in northeastern Indiana and a little lower in southwestern Indiana. Columbia City, Dubois, Oolitic and Wanatah recorded low temperatures of 28°F with Greencastle, New Castle, and Wheatfield coming in at 25°F. West Lafayette and Butlerville had low temperatures of 27°F and all other stations reporting had temperatures of 29°F or above. Remember that official reporting stations measure temperatures at 4.5 feet above the soil surface. On a clear-still night, temperatures at the soil surface can be 2 to 5 degrees colder.

The temperatures themselves were not unusual for this time of year. What is unusual is that there are fields of corn and soybean already emerging due to some planting earlier in the month (albeit limited acreage statewide). Consequently, some farmers are wondering about the likelihood of having to replant fields that may be severely damaged by frost and/or lethal cold temperatures.

Lethal cold temperature for corn is typically considered to 28°F, while soybean can typically withstand somewhat cooler temperatures.

Early planted corn and soybean plants were examined at the Agronomy Research Center, near West Lafayette, at noon on Wednesday to determine the extent of the freeze damage. Soybean plants at the VE and VC stages of development were examined. Nearly all of the growing points were frozen and about 2/3 of the plants had frozen hypocotyls. The region of the hypocotyl just below the cotyledonary node had already lost turgor pressure and was becoming soft and shrunken. Within two or three days, these plants will shrivel to point that only the cotyledons will be identifiable. It was not possible to determine so soon after the damage the fate of those plants without frozen hypocotyls but with possibly frozen growing points.

Corn plants at the VE to V1 stages of development were severely damaged above ground, with leaves already drooped over and turning greenish-black. Such damaged leaves will slowly bleach to a straw color as the tissue dries out. As the frosted leaf tissue in the whorl dries, the whorl will often develop a constricted 'knot' that may restrict expansion of the

(Continued on Page 4)

Weather Information Table

Week ending Sunday April 22, 2001

Station	Past Week Weather Summary Data							Accumulation				
	Air Temperature				Precip.		Avg	April 1, 2001 thru April 22, 2001				
							4 in	Precipitation		GDD Base 50°F		
	Hi	Lo	Avg	DFN	Total	Days	Soil Temp	Total	DFN	Days	Total	DFN
Northwest (1)												
Valparaiso_Ag	77	27	52	+2	0.60	4		2.40	-0.51	11	135	+91
Wanatah	74	24	47	-4	1.14	5	52	2.38	-0.41	13	110	+78
Wheatfield	76	25	48	-2	1.10	5		2.96	+0.17	13	137	+103
Winamac	74	25	48	-4	1.02	5	50	2.94	+0.22	13	139	+92
North Central(2)												
Logansport	76	28	48	-3	0.76	5		3.34	+0.83	12	153	+108
Plymouth	75	23	47	-6	1.06	5		2.69	-0.14	13	126	+74
South_Bend	75	25	48	-2	1.59	5		3.55	+0.70	12	137	+100
Young_America	76	28	49	-3	0.49	3		2.65	+0.14	10	155	+110
Northeast (3)												
Bluffton	77	26	47	-5	1.01	5	52	3.21	+0.47	14	151	+102
Fort_Wayne	75	26	49	-3	1.35	6		3.46	+0.97	14	154	+113
West Central(4)												
Crawfordsville	78	22	48	-6	0.29	5	54	2.17	-0.83	12	169	+97
Perrysville	76	25	50	-3	0.17	3	53	1.64	-1.19	10	192	+131
Terre_Haute_Ag	78	26	52	-3	0.75	5	55	2.79	+0.00	13	224	+145
W_Lafayette_6NW	77	26	49	-3	0.22	4	47	2.49	-0.18	10	161	+113
Central (5)												
Castleton	76	28	50	-4	0.41	3		2.56	-0.11	10	198	+134
Greenfield	75	28	49	-4	0.35	5		2.00	-0.90	12	196	+142
Greensburg	74	28	50	-3	0.38	3		2.63	-0.29	9	206	+140
Indianapolis_AP	76	26	51	-3	0.26	4		1.76	-0.91	9	231	+160
Indianapolis_SE	75	28	49	-5	0.23	3		1.77	-0.90	8	196	+132
Tipton_Ag	76	28	48	-3	0.66	3	51	2.91	+0.07	9	160	+124
East Central (6)												
Farmland	78	25	46	-5	0.78	5	46	3.40	+0.79	10	156	+123
New_Castle	74	25	45	-5	0.61	6		3.78	+0.83	13	148	+112
Southwest (7)												
Dubois_Ag	74	28	52	-4	0.09	1	55	1.25	-1.82	5	255	+157
Evansville	76	26	55	-3	0.02	2		1.31	-1.60	8	286	+155
Freelandville	75	30	52	-4	0.06	3		1.36	-1.39	9	239	+148
Shoals	75	26	51	-4	0.05	2		1.22	-1.72	6	240	+150
Vincennes_5NE	76	26	53	-3	0.02	2	54	1.02	-1.73	7	244	+153
South Central(8)												
Bloomington	75	28	50	-5	0.21	4		0.94	-1.86	7	233	+145
Tell_City	75	28	51	-6	0.09	2		1.24	-2.29	5	259	+143
Southeast (9)												
Scottsburg	75	28	52	-4	0.12	1		1.61	-1.45	7	246	+155

DFN = Departure From Normal (Using 1961-90 Normals Period).

GDD = Growing Degree Days.

Precipitation (rain or melted snow/ice) in inches.

Precipitation Days = Days with precipitation of 0.01 inch or more.

Air Temperatures in Degrees Fahrenheit.

Copyright 2001: AWIS, Inc. All Rights Reserved.

The above weather information is provided by AWIS, Inc.
For detailed ag weather forecasts and data visit the AWIS home page at
www.awis.com or call toll free at 1-888-798-9955.

Frost & Low Temperature Injury to Corn and Soybean (Continued)

undamaged whorl tissue later on. Usually, knotted corn plants will successfully recover as the expanding whorl tissue breaks these knots. Once in a great while, it may be necessary to mow a frosted corn field to cut off severely knotted leaf tissue. The key to deciding whether to mow or not is to allow the damaged field three to five days to show you how well it is recovering.

As with most early-season injuries to corn, the recovery of frosted corn depends greatly on whether the internal growing point region was damaged. The good news is that the growing point region of corn younger than growth stage V6 (six leaves with visible leaf collars, roughly knee-high) is below the soil surface and protected from aboveground frost damage. Inspection of the growing point regions of the plants at the Agronomy Research Center was inconclusive, although there was evidence of external tissue damage to the pseudo-stem (the rolled leaves that constitute the 'stem' on such young plants). The uncertainty is due to whether the temperature at the growing point dropped to lethal levels.

The bottom line on diagnosing the severity of frost or low temperature injury to corn or soybean is that you generally need to wait three to five days after

the weather event before you can accurately assess the extent of damage or recovery. Injury to either crop can look very serious the day after the event, but recovery may be possible if the growing points are not damaged. These three to five days will be better spent continuing to plant the remainder of your crop acres, assuming that most growers are not yet finished with corn and soybean planting.

After three to five days, surviving corn plants should be showing new leaf tissue expanding from the whorls, while dead corn plants will still look dead. Yield loss to frost damage in corn younger than V6 is related primarily to the degree of stand loss, not to the degree of leaf damage. Surviving soybean plants will show new leaves emerging from one or both nodes at the cotyledons, while dead plants will still look dead. If recovery is evident after three to five days, then replanting is not justified. If a significant proportion of the population is obviously dead after this same period of time, then replanting may be justified.

Bob Nielsen & Ellsworth Christmas, Dept of Agronomy, Purdue University. This article also contains pictures, which can be viewed at: http://www.entm.purdue.edu/entomology/ext/targets/p&c/P&C2001/P&C5_2001.pdf (pgs. 7 & 8).

The INDIANA CROP WEATHER REPORT (USPS 675-770), (ISSN 0442-817X) is issued weekly April through November by the Indiana Agricultural Statistics Service, Purdue University, 1148 AgAd Bldg, Rm 223, West Lafayette IN 47907-1148. Second Class postage paid at Lafayette IN. For information on subscribing, send request to above address. POSTMASTER: Send address change to the Indiana Agricultural Statistics Service, Purdue University, 1148 AgAd Bldg, Rm 223, West Lafayette IN 47907-1148.